AS I STEP ONTO THE POLISHED WOOD FLOOR OF

the peaceful Chinese country house, a fountain gurgles softly and a light breeze stirs the scarlet curtain in a doorway. Clad in a stylish blue-and-purple dress, Anshe Chung waves me to a low seat at a table set with bowls of white rice and cups of green tea. I'm here to ask her about her booming land development business, which she has built from nothing two years ago to an operation of 17 people around the world today. As we

chat, her story sounds like a classic tale of entrepreneurship.

Except I've left out one small detail: Chung's land, her beautifully appointed home, the steam rising from the teacups—they don't exist. Or rather, they exist only as pixels dancing on the computer screens of people who inhabit the online virtual world called Second Life. Anshe Chung is an avatar, or onscreen graphic character, created by a Chinese-born language teacher



A journey into a place in cyberspace where thousands of people have imaginary lives. Some even make a good living. Big advertisers are taking notice

BY ROBERT D. HOF

REAL BUCKS The avatar named Anshe Chung may be a computerized chimera, but the company she represents is far from imaginary. Second Life participants pay "Linden dol-lars," the game's currency, to rent or buy virtual homesteads from Chung so they have a place to build and show off their creations. But players can convert that play money into U.S. dollars, at about 300 to the real dollar, by using their credit card at online currency exchanges. Chung's firm now has virtual land and currency holdings worth about \$250,000 in real U.S. greenbacks. To handle rampant growth, she just opened a 10-person studio and office in Wuhan, China. Says Chung's owner, who prefers to keep her real name private to deter reallife intrusions: "This virtual role-playing economy is so strong that it now has to import skill and services from the realworld economy."

Oh yes, this is seriously weird. Even Chung sometimes thinks she tumbled down the rabbit hole. But by the time I visited her simulated abode in late February, I already knew that something a lot stranger than fiction was unfolding, some unholy offspring of the movie The Matrix, the social networking site MySpace.com, and the online marketplace eBay. And it was growing like crazy, from 20,000 people a year ago to 170,000 today. I knew I had to dive in myself to understand what was going on here.

As it turns out, Second Life is one of the many so-called massively multiplayer online games that are booming in popularity these days (page 78). Because thousands of people can play at once, they're fundamentally different from traditional computer games in which one or two people play on one PC. In these games, typified by the current No.1 seller, World of Warcraft, from Vivendi Universal's Blizzard Entertainment unit, players are actors such as warriors, miners, or hunters in an





and other products for use inside Second Life. One recent first: They sold a real product, a graphics card, for Linden dollars, the virtual-world currency.

Financier



Mystery man who won't reveal his true identity. founded the virtual-world Metaverse Stock Exchange.

His land development firm, Cyberland, was first to go public.





Justin Bovington, founder and CEO of the marketing consultant **Rivers Run**

Red in London, helps companies create virtual-world presences. He worked with one agency to promote Walt Disney's Hitchhiker's Guide to the Galaxy.

The Avatars and **Their Owners**

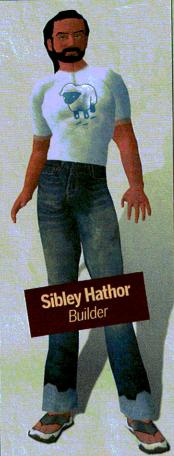
endless dieval-style quest for virtual gold and power.

All told, at least 10 million

people pay \$15 and up a month to play these games, and maybe people pay \$15 and up a month to play these games, and maybe 20 million more log in once in a while. Some players call World of Warcraft "the new golf," as young colleagues and business partners gather online to slay orcs instead of gathering on the green to hack away at little white balls. Says eBay Inc. founder and Chairman Pierre M. Omidyar, whose investing group, Omidyar Network, is a Linden Lab backer: "This generation that grew up on video games is blurring the lines between that grew up on video games is blurring the lines between games and real life."

Second Life hurls all this to the extreme end of the playing field. In fact, it's a stretch to call it a game because the residents,











The Chineseborn language teacher now living in Germany has amassed Second Life

assets worth more than \$250,000 by buying virtual land, developing it, and selling or renting it out. Now, she's known as the Rockefeller of Second Life.



T. Sibley
Verbeck is CEO
of Electric
Sheep Co., a
company that
helps build
games and other

areas in Second Life. One recent event melded a real-world party in Washington, D.C., with a virtual-world counterpart. Avatars in Second Life could see the D.C. party and vice versa.



Nathan Keir, a 31-year-old programmer in Australia, invented a game called Tringo that's all the rage

in Second Life. Unable to contain its popularity, he has since licensed the game to a company for use on real-world cell phones and Nintendo's GameBoy Advance.



A stay-at-home dad in Norwich, England, Chris Mead dabbled in creating "couples animations"

that make two avatars dance or cuddle. They're so popular that he earns up to \$90,000 a year selling thousands of them a week. He hopes that will pay off his mortgage.

as players prefer to be called, create everything. Unlike in other virtual worlds, Second Life's technology lets people create objects like clothes or storefronts from scratch, LEGO-style, rather than simply pluck avatar outfits or ready-made buildings from a menu. That means residents can build anything they can imagine, from notary services to candles that burn down to pools of wax.

PROPERTY RIGHTS You might wonder, as I did at first, what's the point? Well, for one, it's no less real a form of entertainment or personal fulfillment than, say, playing a video game, collecting matchbook covers, or building a life list of birds you've seen. The growing appeal also reflects a new model for media entertainment that the Web first kicked off: Don't just watch—do something. "They all feel like they're creating a

new world, which they are," says Linden Lab Chief Executive Philip Rosedale.

Besides, in one important way, this virtual stuff isn't imaginary at all. In November, 2003, Linden Lab made a policy change unprecedented in online games: It allowed Second Life residents to retain full ownership of their virtual creations. The inception of property rights in the virtual world made for a thriving market economy. Programmer Nathan Keir in Australia, for example, created a game played by avatars inside Second Life that's so popular he licensed it to a publisher, who'll soon release it on video game players and cell phones. All that has caught real-world investors' attention, too. On Mar. 28, Linden Lab raised a second, \$11 million round of private financing, including new investor Jeff Bezos, CEO of Amazon.com Inc.

Virtual worlds may end up playing an even more sweeping role—as far more intuitive portals into the vast resources of the

COVER STORY

entire Internet than today's World Wide Web. Some tech thinkers suggest Second Life could even challenge Microsoft Corp.'s Windows operating system as a way to more easily create entertainment and business software and services. "This is why I think Microsoft needs to pay deep attention to it," Robert Scoble, Microsoft's best-known blogger, recently wrote.

WEAK SPOT A lot of other realworld businesses are paying attention. That's because virtual worlds could transform the way they operate by providing a new template for getting work done, from training and collaboration to product design and marketing. The British branding firm Rivers Run Red is working with real-world fashion firms and media companies inside Second Life, where they're creating designs that can be viewed in all their 3D glory by colleagues anywhere in the world. A consortium of corporate training folks from Wal-Mart Stores, American Express, Intel, and more than 200 other companies, organized by learning and technology think tank The MASIE Center in Saratoga Springs, N.Y., is experimenting inside Second Life with ways for companies to foster more collaborative learning methods. Says Intel Corp. learning consultant Brent T. Schlenker:

"We're trying to get in on the front end of this new workforce that will be coming."

The more I kept hearing about all this, the more I knew this was wa-a-a-ay more than fun and games. So early this year I signed up at www.secondlife.com, downloaded the software, logged on, and created my persona. As reporter "Rob Cranes," I embarked on my journey.

And promptly got lost in the vast, uncharted terrain.

Click: I land at the Angry Ant, a nightclub holding a "Naked Hour" where avatars are in various stages of undress, dancing lasciviously. Is it getting warm in here?

Click: I stumble upon someone teaching a class on how to

CYBER BIZ

It's Not All Fun and Games

t's hard to imagine a less corporate setting than the often bizarre online virtual worlds such as Second Life. But to a surprising extent, mainstream businesses are already dipping their toes into the virtual water. They find it's not only a cheaper but also often a better way to perform a wide variety of corporate tasks.

For one, as any flight simulator fan knows, an imaginary world can make a boffo training ground. Tim Allen, head of technology at Crompco Corp., an underground gas tank testing Virtual worlds firm, discovered that as the pseudonymous "FlipperPA abound Peregrine" inside Second Life. There, he built a virtual gas in useful station, graphically showing all the tanks and gas lines business under the asphalt. He says it's applications much easier to grasp the station's workings this way than it is on paper. "It's great

showing changing regulations to existing employees," says Allen, who also runs the Web mall SLBoutique.

Companies are also starting to use virtual worlds as alternate offices in which colleagues and partners can meet and view materials that the Web isn't rich enough to display well. Justin Bovington, chief executive of the London marketing firm Rivers Run Red, for instance, uses Second Life as a virtual meeting place where ads, posters, and other designs can be viewed in

3D settings by clients and partners around the world in real time. That saves the weeks it would take to shuttle physical materials back and forth.

For Walt Disney Co.'s movie Hitchhiker's Guide to the Galaxy, Bovington's firm worked with the media agency Carat Group to develop a marketing

for training new hires and

develop a marketing

buy and sell virtual land to a motley crew of avatars sitting attentively on chairs watching PowerPoint slides. Do we get a toaster when we're done?

Click: Suddenly, I'm underwater at Cave Rua, watching a school of fish swim by. Cool, but what do I do here?

Click: Here's a virtual doctor's office, where a researcher runs a simulation of what it's like to be a hallucinatory schizophrenic. A menacing British voice from a TV urges: "Shoot yourself. Shoot them all. Get the gun out of the holster and shoot yourself, you!@#&!" Yikes, where's that teleport button?

My disorientation points up one of the big challenges of these virtual worlds, especially one so open-ended as Second



cokestudios



Second Life, and the British fashion designer Mrs Jones, which offers virtual versions of its real-world apparel designs. "They're all interested in creating their own branded Second Lifes," says Bovington, whose avatar goes by the name "Fizik Baskerville." "Allowing people to immerse themselves in your brand is the Holy Grail."

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At Coca-Cola's campaign, Using MyCoke.com, games, Second Life to create music, and online 3D models of the android chat character Marvin for posters, CD-ROMs, and a Web site, they placed the character in various poses to see what designs worked best-all in 20 minutes instead of the two weeks typically required to build physical models. Overall, Rivers Run Red saved up to \$175,000 last year using Second Life to eliminate expensive modeling services and travel.

Other businesses have begun to use virtual worlds as marketing tools to reach young people who prefer logging on to games to switching on the TV. Bovington is working with media companies, a distillery that wants to set up a dance club inside

LIQUID ASSETS
At Coca-Cola's
Coke.com, games,
nusic, and online
chat
ite,
lous poses to
all in 20

Some big brands are already well along in the quest, creating their own independent virtual worlds for customers. Coca-Cola's MyCoke.com envelops fans in everything Coke with games, music, and chat in a virtual setting. Wells Fargo's Stagecoach Island is a virtual world where people can play games to learn about finance while hanging out with friends. Some have even

held virtual birthday parties there. "It wasn't just about slapping our logo up in a competitive game," says Tim Collins, Wells's senior vice-president for experiential marketing. "We have to make it fun to reach young adults."

All this could prove risky. As companies provide real services inside virtual worlds, such as employment and investment opportunities, they could draw attention—and regulation—from real-world authorities like the courts and legislatures. And more than in any other medium, companies don't make the rules inside virtual worlds—the participants do. Too much reality, especially the commercial kind, could scare away the very people that companies are trying to reach.

—Robert D. Hof

cokestudios



Life: With nothing to shoot and no quest to fulfill, it's hard for newbies to know what to do. Virtual worlds require personal computers with fairly advanced graphics and broadband connections and users with some skill at software. "The tools are the weak spot," says Will Wright, legendary creator of *The Sims* video game, who nonetheless admires Second Life. For now, he says, "That limits its appeal to a fairly hard-core group."

Still, there's no denying the explosion of media, products, and services produced by users of these virtual worlds. IGE Ltd., an independent online gaming services firm, estimates that players spent about \$1 billion in real money last year on virtual goods and services at all these games combined, and predicts

that could rise to \$1.5 billion this year. One brave (or crazy) player in the online game *Project Entropia* last fall paid \$100,000 in real money for a virtual space station, from which he hopes to earn money charging other players rent and taxes. In January inside Second Life alone, people spent nearly \$5 million in some 4.2 million transactions buying or selling clothes, buildings, and the like.

That can add up to serious change. Some 3,100 residents each earn a net profit on an average of \$20,000 in annual revenues, and that's in real U.S. dollars. Consider the story of Chris Mead, aka "Craig Altman," on Second Life. We exchange text messages via our keyboards at his shop inside Second Life,

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where he hawks ready-made animation programs for avatars. It's a bit awkward, all the more so because as we chat, his avatar exchanges tender caresses with another avatar named "The Redoubtable Yoshimi Muromachi." Turns out she's merely an alter ego he uses to test his creations. Still, I can't help but make Rob Cranes look away.

SHOPPING SPREE Mead is a 35-year-old former factory worker in Norwich, England, who chose to stay home when he and his working wife had their third child. He got on Second Life for fun and soon began creating animations for couples: When two avatars click on a little ball in which he em-

beds the automated animation program, they dance or cuddle together. They take up to a month to create. But they're so popular, especially with women, that every day he sells more than 300 copies of them at \$1 or less apiece. He hopes the \$1,900 a week that he clears will help pay off his mortgage. "It's a dream come true, really," he says. "I still find it so hard to believe."

His story makes me want to venture further into this economy. Besides, my photo editor is nagging me to get a shot of my avatar, which needs an extreme makeover. Time to go shopping! First I pick out a Hawaiian shirt from a shop, clicking on the image to buy it for about 300 Lindens, or about a dollar. Nice design but too tight for my taste, so I prowl another men's shop for a jacket. I find something I like, along with a dark gray

THE BASICS

The Online Universe: An Old Fogey's Guide

sk most people under the age of 30 about online games, and chances are they'll wax enthusiastic about their favorite, whether it's Neopets for the kiddies or World of Warcraft for twentysomethings. For everyone else, the most likely response is: Huh? Here's a primer on these strange new worlds.

What the heck are they?

They're like video games, except you're online with thousands of other people playing at the same time. Some are medieval adventures, others are set in space, and still others are little more than online chat rooms.

So what do you do, exactly?

Oh, kill things. Join up with other people in "guilds" so you can kill bigger things. Play roles like warrior or wizard. Earn imaginary gold and gain the power to do more activities in the game. Or, in less scripted worlds such as Second Life, you make everything up along the way, creating your own virtual line of sworld.

Wait, first tell me how I get started.

Fire up your personal computer (a newer one that can handle the whizzy graphics), download the software from the game's Web site, and sign up for an account. Then you create an avatar to travel around that particular digital world.

Uh-avatar?

It's a graphic representation of you inside the world. In Second Life, avatars typically look more or less like humans, though they can be modified in such detail—different hair, eyes, body type, even clothes—that each one is unique, sometimes bizarre. You see the game from the perspective of your easy. But with a little more work using Linden's own programming language, you can build nightclubs, casinos, beaches, skydiving services, retail stores—you name it.

How do I check all this out?

Using your mouse and keyboard, you walk or fly your avatar around the digital landscape. The arrow keys move the avatar forward, backward, and sideways. Use the page-up button to jump up or fly and look around.

What does it cost?

You can get a free basic membership, which allows you to customize your avatar and explore Second Life. If you want to own land on which to put a house or garden or other



avatar, viewing whatever is in your avatar's line of sight and seeing or hearing only the conversations of others nearby.

O.K., so tell me about this Second Life.

It's a three-dimensional online world, set up by Linden Lab of San Francisco and its CEO, Philip Rosedale. Unlike in other virtual worlds, you and the other 170,000 users create just about everything inside it. Software menus make simple construction from basic shapes objects, you need to sign up for a premium membership, which is \$9.95 a month. Buy more land, and monthly fees rise.

Why would anyone go to all this trouble?

You own whatever digital objects you create within Second Life, whether they're elegant avatar dresses or a cool motorcycle. So if you want, you can open your own business selling your virtual creations, like thousands of Second Life "residents" already do.

COVER STORY

blazer and pants. As a fitting finishing touch for a reporter, I add a snazzy black fedora, though I'm bummed that it can't be mod-

ified to add a press card.

I'm also feeling neglectful leaving my avatar homeless every time I log out. It's time to buy some land, which will give me a place to put my purchases, like a cool spinning globe that one merchant offered cheap. And maybe I'll build a house there to show off to friends. I briefly consider buying a whole island, but I have a feeling our T&E folks would frown on a \$1,250 bill for imaginary land. Instead, I purchase a 512-square-meter plot

regulates their financial activities? And doesn't this all look like a great way for crooks or terrorists to launder money?

Beyond business, virtual worlds raise sticky social issues. Linden Lab has rules against offensive behavior in public, such as racial slurs or overtly sexual antics. But for better or worse, consenting adults in private areas can engage in sexual role-playing that, if performed in real life, would land them in jail. Will that draw fire from law enforcement or, at least, publicity-seeking politicians? Ultimately, what are the societal implications of spending so many hours playing, or even working, in-

side imaginary worlds? Nobody

really has good answers yet.

My head hurts. I just want to have some fun now. It's time to try Second Life's most popular game. *Tringo* is a combination of bingo and the puzzle-like PC game *Tetris*, where you quickly try to fit various shapes that appear on a screen into squares, leaving as few empty squares as you can. I settle in on a floating seat, joining a dozen other competing avatars at an event called Tringo Money Madness @Icedragon's Playpen—and proceed to

lose every game. Badly. I start to get the hang of it and briefly consider waiting for the

next Tringo event until I see the bonus feature: a movie screen showing the band Black Sabbath's 1998 reunion tour.

Instead, I seek out *Tringo*'s creator, Nathan Keir, a 31-year-old programmer in Australia whose

avatar is a green-and-purple gecko, "Kermitt Quirk." It turns out Keir's game is so popular, with 226 selling so far at 15,000 Lindens a pop, or about \$50, that a real-world company called Donnerwood Media ponied up a licensing fee in the low five figures, plus royalties. *Tringo* soon will grace Nintendo Co.'s Game Boy Advance and cell phones. "I never expected it at all," Keir tells me, his awe evident even in a text chat clear across the world. He's working on new games now, wondering if he can carve out a living. That would be even cooler than the main benefit so far: making his mum proud.

really My some:
Life's combi like Poly try to on a sefew en in on other called drago lose

READY TO WARE
British designer Mrs Jones offers downloadable duds

with ocean view, a steal for less than two bucks. Plopping my globe onto my plot, I take a seat on it and slowly circle, survey-

ing my domain. My Second Life is good.

I soon discover that Second Life's economy has also begun to attract second-order businesses like financial types. One enterprising character, whose avatar is "Shaun Altman," has set up the Metaverse Stock Exchange inside Second Life. He (at least I think it's a he) hopes it will serve as a place where residents can invest in developers of big projects like virtual golf courses. In a text chat session in his slick Second Life office, Altman concedes that the market is "a bit ahead of its time. I'm sure it will take quite some time to build up

a solid reputation as an institution." No doubt, I'm thinking, especially when the CEO is a furry avatar whose creator refuses to

reveal his real name.

Premature or not, such efforts are raising tough questions. Virtual worlds may be games at their core, but what happens when they get linked with real money? (For one, people such as Chung's owner start to take changes to their world very seriously. She recently threatened to create her own currency inside Second Life after the Linden dollar's value fell.) Ultimately, who

Who's crowding into my virtual space? Suddenly I'm surrounded by Greek temples

TALENT BANK After all my travels around Second Life, it's becoming apparent that virtual worlds, most of all this one, tap into something very powerful: the talent and hard work of everyone inside. Residents spend a quarter of the time they're logged in, a total of nearly 23,000 hours a day, creating things that become part of the world, available to everyone else. It would take a paid 4,100-person software team to do all that, says Linden Lab. Assuming those programmers make about \$100,000 a year, that would be \$410 million worth of free work over a year. Think of it: The company charges customers anywhere from \$6 to thousands of dollars a month for the privilege of doing most of the work. And make no mistake, this would be real work were it not so fun. In Star Wars Galaxies, some players take on the role of running a pharmaceutical business in which they manage factory schedules, devise ad campaigns, and hire other players to find raw materials-all imaginary, of course.

COVER STORY

use gaming's psychology, incentive systems, and social appeal to get real jobs done better and faster? "People are willing to do tedious, complex tasks within games," notes Nick Yee, a Stanford University graduate student in communications who has extensively studied online games. "What if we could tap into that brainpower?"

In other words, your next cubicle could well be inside a virtual world. That's the mission of a secretive Palo Alto (Calif.) startup, Seriosity, backed by venture firm Alloy Ventures Inc. Seriosity is exploring whether routine real-world responsibilities might be assigned to a custom online game. Workers having fun, after all, likely will be more productive. "We want to use the power of these games to transform information work," says Seriosity CEO Byron B. Reeves, a Stanford professor of communications.

BUILDING BOOM Whether or not their more fantastic possibilities pan out, it seems abundantly clear that virtual worlds offer a way of testing new ideas like this more freely than ever. "We can and should view synthetic worlds as essentially unregulated playgrounds for economic organization," notes Edward Castronova, an associate professor in telecommunications at Indiana University at Bloomington and author of the 2005 book Synthetic Worlds: The Business and Culture of

I get a taste of the lack of regulation just as we're about to go to press. Logging in to Second Life after a few days off, I see that someone has erected a bunch of buildings on my avatar Rob Cranes's land, which is located in a region called Saeneul. The area was nearly empty when I arrived, but now I'm

surrounded by Greek temples under construction. So much for my ocean view. Online notes left by one "Amy Stork" explain that the "Saeneul Residents

More on Second Life, Only at Businessweek.com

Who's Who: A slide show of Second Life avatars and businesses Avatar to Avatar: Rob Cranes, author Robert Hof's alter ego.

interviews entrepreneur Anshe Chung Virtual Worlds Tour: How we got to this point

He's Got Games: A talk with Synthetic Worlds author Edward Castronova

The Story Behind the Story: For a podcast interview with Silicon Valley Bureau Chief Hof by Executive Editor John A. Byrne, go to businessweek.com/search/podcasting.htm

BusinessWeek online

http://www.businessweek.com/extras

Association" is building an amphitheater complex, and "your plot is smack bang in the middle." She's "confident that we can find a *much* better plot for you than this one Love, Amy xx."

Oh, really? For some reason, this causes Rob Cranes to blow a gasket. He resists my editor's advice to "head to the virtual gun store," but he fires off angry e-mail complaints to Ms. Stork and Linden Lab and deletes the trespassing buildings, planting some trees in their place. Then he reconsiders: Maybe a ramshackle cabin with a stained sofa and a sun-bleached Chevy up on blocks would be a great addition to his plot.

At first, I wonder why I (or my avatar) has such a visceral reaction to this perceived intrusion. Then a flush of parental pride washes over me: My avatar, which so far has acted much like me, hanging back from crowds and minding his punctuation in text chats, suddenly is taking on a life of his own. Who will my

alter ego turn out to be? I don't know yet. And maybe that's the best thing about virtual worlds. Unlike in the corporeal world, we can make of our second lives whatever

we choose.

Say What?

Some common terms in the

virtual world of Second Life

Did you see the build I rezzed today? I'll give you a teleport to the **sim.** I used only a few **prims** so I wouldn't cause much **lag** and so the Lindens wouldn't think I'm some griefer trying to crash the grid. Tringo is fun for most residents, I guess, but

building is way cooler-better than RL!"

AVATAR Graphic representation of a person

BUILD Object created in Second Life

GRID Collection of servers that run a virtual world

GRIEFER Someone who delights in making mischief, such as insulting residents or creating so many objects that they crash the virtual world

IN-WORLD Logged onto Second

LAG Slowed-down activities caused by too many residents or graphic objects in a small area

LINDEN Nickname for employees of Second Life operator Linden

LINDEN DOLLAR Official in-world currency, now worth about 300 to the U.S. dollar

METAVERSE The teeming online universe in Neal Stephenson's novel Snow Crash, an inspiration for many virtual worlds

PRIM "Primitive," or fundamental building block of all Second Life creations

RL Real life (also known as meatspace)

RESIDENTS Members of Second Life (don't call 'em players)

REZ Create an object or make it appear (or achieve resolution) in Second Life

SIM Short for simulator, a virtual 16-acre geographic area run by a single server

TELEPORT Transport instantly from one place to another

TRINGO Popular Second Life game combining bingo with the computer game Tetris

Data: Hamlet Linden of New World Notes, BusinessWeek